

## Health Risks among Rhode Island High School Students, 2001

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The national Centers for Disease Control and Prevention (CDC) report that 7 out of 10 deaths in the 10 to 24 age group in the United States result from motor-vehicle crashes, other unintentional injuries, homicides, and suicides. In addition, each year there are nearly 900,000 pregnancies among 15-19 year old females, and approximately 3 million persons aged 10-19 contract sexually transmitted diseases. Among U.S. adults over 25 years old, almost two-thirds of all deaths result from cardiovascular disease and cancer. The US Department of Health and Human Services has addressed many of these issues through youth-related objectives in their Healthy People 2010 report.<sup>1</sup>

Several behaviors that typically initiate during youth are primarily responsible for these major sources of mortality, morbidity, and social problems. Those behaviors include weapon carrying, physical fighting, attempted suicide, drinking or drug use while driving, not wearing a seatbelt in a motor vehicle, not wearing a helmet when riding a bicycle, unprotected sexual intercourse, tobacco use, unhealthy dietary behaviors, and physical inactivity.<sup>2</sup> This article presents data on the prevalence of these and other behaviors among Rhode Island public high school students in 2001.<sup>3</sup>

**Methods.** CDC sponsored a national Youth Risk Behavior Survey (YRBS) as well as a separate YRBS in 38 states and 19 localities in 2001. For Rhode Island, the YRBS has been a joint effort of the state Departments of Health and Education since 1995. The State conducts the voluntary, self-administered survey in alternate years among randomly selected high schools and students. The YRBS monitors health-risk behaviors related to injuries, substance abuse, sexual behaviors, and cardiovascular and other chronic diseases.

Rhode Island administered the 2001 YRBS between March and May among a statewide sample of 1392 public high school students in grades 9-12. Survey administration procedures protected student privacy and anonymity. Trend data are based on comparisons to the 1997 YRBS, the last Rhode Island survey to collect data representative of the State.

**Results.** The proportion of Rhode Island students at risk for 6 of 14 key health related behaviors was substantially lower in 2001 compared to 1997. This conclusion is based on an analysis of 95% confidence intervals around prevalence rates observed in both years. For potential sources of injuries (Figure 1),

there was improvement in seatbelt use (cars), helmet use (bicycles), and carrying weapons, whereas there was little or no significant change in physical fights and attempted suicide.

Among substance abuse factors (Figure 2), rates decreased for cigarette smoking and use of inhalants, but remained relatively stable for alcohol and marijuana use as well as driving when drinking alcohol. Students also reported little change in sexual intercourse and condom use, and lack of AIDS/HIV education actually increased significantly. (Figure 3) For chronic disease related behaviors (Figure 3), physical activity improved substantially. For the first time, the 2001 YRBS also included data on body weight and the daily consumption of fruits and vegetables in the past week.

Findings for 2001 show that not using a bicycle helmet (85% of students who rode a bicycle in the past year) was the most prevalent of the major behaviors related to injuries (Figure 1). By

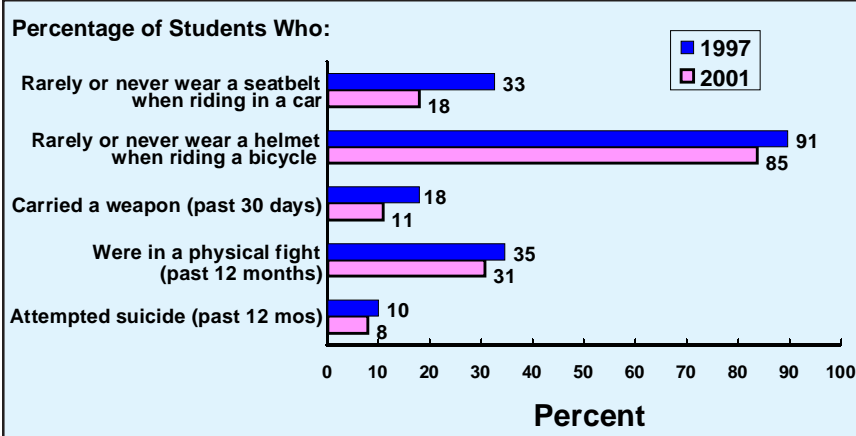


Figure 1. Reported health risks for intentional and unintentional injuries among students in grades 9-12, Rhode Island, 1997 and 2001.

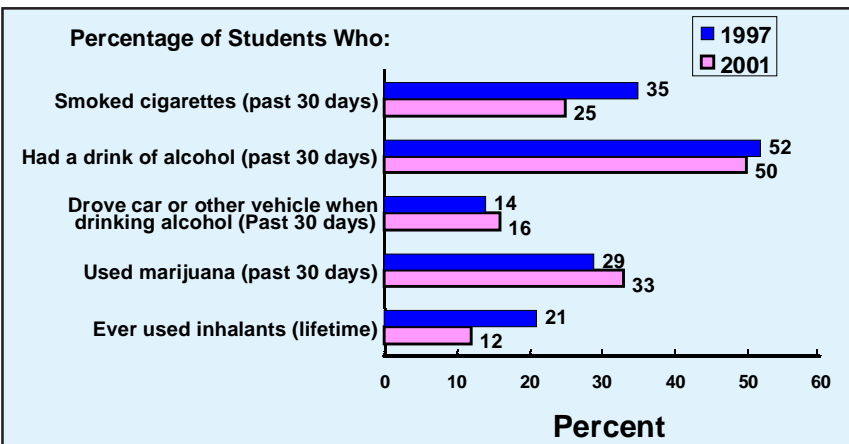


Figure 2. Reported health risks for tobacco, alcohol, and other substance use among students in grades 9-12, Rhode Island, 1997 and 2001.

contrast, 31% of respondents were in a physical fight during the past year, including 41% of males and 21% of females. In addition,

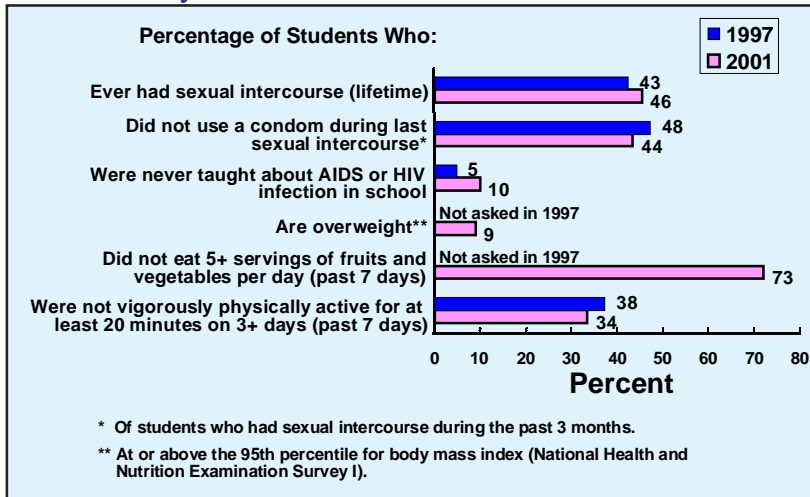


Figure 3. Reported health risks for sexual behavior, weight, nutrition, and physical activity among students in grades 9-12, Rhode Island, 1997 and 2001.

18% of students rarely or never wore a seatbelt in a car, and 11% carried some type of weapon during the past month. Perhaps most distressing, 8% of students attempted suicide during the past year, including 10% of females and 6% of males.

More Rhode Island students consumed alcohol in 2001 compared to other frequently abused substances (Figure 2). Half of all respondents had at least one drink in the past month compared to one-third of students who smoked marijuana and one-quarter who smoked cigarettes. In contrast, only 12% of students had ever used inhalants in their lifetime. The use of other substances such as cocaine or heroin was even lower. Also, 16% of respondents drove a car or other vehicle when they had been drinking alcohol in the past month. This measure incorporates risks for both substance abuse and motor vehicle injury.

Concerning sexual behavior, almost half of all high school students in 2001 reported that they had ever had sexual intercourse (Figure 3). In addition, 36% of the students had sexual intercourse during the last 3 months, including 51% of high school seniors. Among those respondents who were sexually active during that period, just under half did not use a condom, which greatly increased their risk of disease or unwanted pregnancy. Of particular concern, 10% of respondents reported that they were never taught about AIDS or HIV infection in school, a significant increase from 1997.

The 2001 YRBS collected information on height and weight that is the basis for calculating body mass index and overweight prevalence estimates (Figure 3). However, such estimates derived from self-reported data are probably low.<sup>4</sup> With this caveat in mind,

9% of students were overweight, including 15% of males and 4% of females. In contrast, 31% of students in 2001 thought they were overweight, females far more often than males (37% and 25%, respectively). Exercise and diet are strongly related to weight and the risk of disease. One-third of the YRBS respondents participated in less vigorous physical activity than recommended, and nearly three-quarters consumed less than five daily servings of fruits and vegetables in the past week.

**Discussion.** There were significant increases in bicycle helmet use, seatbelt use and physical activity among teens. There were declines in carrying weapons, cigarette smoking and inhalant use. More progress is essential, but it is encouraging to see these gains in healthy lifestyle behaviors. The 2001 YRBS data indicate much room for improvement. More students report not having had AIDS/HIV education, and condom use has not increased. Important behaviors remained relatively stable since 1997, including physical fights, attempted suicide, alcohol and marijuana use, and sexual intercourse.

The YRBS is a comprehensive assessment tool providing data for developing and evaluating effective health promotion programs for youth which all agencies can use. The YRBS is also a major data source for monitoring six proposed objectives in Healthy Rhode Islanders 2010,<sup>5</sup> the state-specific version of the national Healthy People 2010. These objectives pertain to physical activity, overweight and obesity, tobacco use, substance abuse, and responsible sexual behavior. Healthy Rhode Islanders 2010 can serve as a guide for targeting programs as well as a benchmark for assessing progress in youth-oriented efforts.

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